

PATENT CLAIMS

1. An arrangement (200, 600) for controlling gear positions in a car, comprising a console having a wall (140; 640), and one or more sensors (A, B) arranged in connection to said wall, and further comprising a gear lever (210, 610), which can move back and forth in a first and second principal direction essentially perpendicular to each other, and a code device (220, 230, 240; 630) which can interact with said sensors (A, B), in which the code device (220, 230, 240; 630) is connected to the gear lever (210, 610) so that the code device is actuated to move in a first direction of movement upon motion of the gear lever in said first principal direction, and in a second direction of movement upon motion of the gear lever in said second principal direction, characterized in that the code device (230, 630) is pivotably secured adjacent to the gear lever (210, 610), which arrangement further comprises means (240) for biasing the code device (230, 630) in the direction of said console wall (140, 640).
2. The arrangement (200, 600) according to claim 1, in which each sensor (A, B) comprises a plurality of sub-sensors disposed in a path (P R N D; +/-).
3. The arrangement according to claim 1 or 2, further comprising an arm (220) by which the code device (230) is pivotably secured adjacent to the gear lever (210).
4. The arrangement according to claim 3, in which the code device comprises a detection element (230) fixed at one end of the arm (210), the motion of the detection element upon motion of the code device being detectable by said sensors (A, B).
5. The arrangement according to claim 4, in which the detection element (230) is pivotably secured at said one end of the arm (220).

6. The arrangement according to claim 5, in which the pivot fastening of the detection element (230) is articulated so that it allows the detection element always to be able to maintain essentially the same angle in relation to the console wall (140), regardless of the motions of the gear lever (210).

7. The arrangement (600) according to claim 1 or 2, in which the said actuation of the code device (630) upon motion of the gear lever (610) is effected by the arrangement comprising means (620, 690, 691, 692, 693, 660) for making the motion of the code device (630) in the said first direction of movement identical, regardless of whether the gear lever is guided forward or backward in its first principal direction.

8. The arrangement (600) according to claim 7, in which the means for the motion of the code device comprise an arm (620), in which the code device (630) is pivotably secured, and in which the arm (620), in turn, is pivotably secured about an axis (660), in which the arm, by means of a mechanism involving a cam (691, 692, 693) and a cam follower (690), is actuated to follow a cam curve upon motion of the gear lever in the first principal direction.

9. The arrangement (600) according to claim 8, in which the cam follower (690) is disposed on the arm (620) and the cam adjoins the gear lever.

10. The arrangement (600) according to any one of claims 7-9, in which the code device (630) comprises a detection element, which is fixed at one end of the arm (620), the motion of the detection element upon motion of the code device being able to be detected by the said sensors (A, B).

11. The arrangement (600) according to claim 10, in which the detection element (630) is pivotably secured at the said one end of the arm (620).

12. The arrangement (600) according to claim 11, in which the pivot fastening of the detection element (630) is articulated, and in which the device (600) comprises means for biasing the code device toward the wall (640), in other words away from the gear lever (610).

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13. An arrangement for controlling a gearbox in a car, comprising a gear lever (210; 610), which can move back and forth in a first and second principal direction essentially perpendicular to each other, and a code device (220, 230, 240; 630), for interaction with one or more sensors (A, B), which
10 code device (220, 230, 240; 630) is secured in the arrangement so that the code device is actuated to move in a first direction of movement upon motion of the gear lever (210; 610) in the said first principal direction, and in a second direction of movement upon motion of the gear lever in the said second principal direction, c h a r a c t e r i z e d i n that the code device is
15 pivotably secured adjacent to the gear lever (210; 610), which arrangement further comprises means (240) for biasing the code device in the direction away from the gear lever.

14. The arrangement according to claim 13, in which each sensor (A, B)
20 comprises a plurality of sub-sensors disposed in paths (P R N D; +/-).

15. The arrangement according to claim 13 or 14, in which the code device comprises an arm (220), which is the part of the code device which is pivotably secured adjacent to the gear lever (210).

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16. The arrangement according to claim 15, in which the interaction of the code device with a sensor is achieved with the aid of a detection element (230) fixed at one end of the arm (220), the motion of the detection element, when the code device is moved by the motion of the gear lever, being
30 detectable by a sensor.

17. The arrangement according to claim 16, in which the detection element (230) is pivotably secured at one end of the arm (220).

18. The arrangement according to claim 17, in which the pivot fastening of the detection element (230) is articulated so that it allows a motion of the detection element in the same plane as the motion of the arm (220) when the arm is actuated by the motions of the gear lever.

19. The arrangement (600) according to claim 13 or 14, in which said actuation of the code device (630) upon motion of the gear lever (610) is effected by the arrangement comprising means (620, 660, 690, 691, 692, 693) for making the motion of the code device (630) in the said first direction of movement identical, regardless of whether the gear lever (610) is guided forward or backward in its first principal direction.

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20. The arrangement (600) according to claim 19, in which the means for the motion of the code device (630) comprise an arm (620) pivotably secured about an axis (660), in which the arm, by means of a mechanism involving cam (691, 692, 693) and cam follower (690), is actuated to follow a cam curve upon motion of the gear lever in the first principal direction.

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21. The arrangement (600) according to claim 20, in which the cam follower (690) is disposed on the arm, and the cam (691, 692, 693) adjoins the gear lever (610).

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22. The arrangement (600) according to any one of claims 19-21, in which the code device comprises a detection element (630) fixed at one end of the arm (620), the motion of the detection element (630) upon motion of the code device being detectable by the said sensors (A, B).

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23. The arrangement (600) according to claim 22, in which the detection element (630) is pivotably secured at the said one end of the arm (620).